^{94}Sr β^- decay 1984Fu12

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni	NDS 107, 2423 (2006)	1-Jan-2006

Parent: ^{94}Sr: E=0.0; $J^\pi=0^+$; $T_{1/2}$=75.3 s *2*; Q(β^-)=3508 *8*; %β^- decay=100.0

1984Fu12: from decay of mass-separated ^{94}Rb. Measured γ, $\gamma\gamma$, Ge(Li) detectors, FWHM=2.1 keV and FWHM=2.0 keV at 1.33 MeV, β-HPGe. 1984Fu12 supersedes 1982Fu17.

1973Gr14: fast chemical separation. Measured γ, $\gamma\gamma$, Ge(Li), FWHM=2.1 keV at 1.33 MeV. All γ's with Iγ>1.0 are also seen by 1973Gr14 and support the results of 1984Fu12.

^{94}Y Levels

E(level)[†]	J^π[‡]	$T_{1/2}$[‡]
0.0	2^-	18.7 min *1*
621.70 *7*	$(2,3^+)$	
723.80 *7*	(1^-)	
906.91 *8*	$(2^-,3^-)$	
1427.71 *7*	1^+	
1437.01 *13*	$(0^-,1^-)$	
2182.42 *13*	1^+	
2373.02 *16*	$(0^-,1^-)$	
2969.93 *22*	1^+	

[†] From least-squares fit to γ energies.
[‡] From Adopted Levels.

β^- radiations

av Eβ=0.91 MeV *3* measured with a Si-Li detector system (1982Al01).

E(decay)	E(level)	Iβ^-[†‡]	Log *ft*	Comments
(538 *8*)	2969.93	0.08 *2*	5.25 *11*	av Eβ=171.1
(1135 *8*)	2373.02	0.113 *22*	6.28 *9*	av Eβ=412.1
(1326 *8*)	2182.42	0.76 *11*	5.72 *7*	av Eβ=494.7
(2071 *8*)	1437.01	0.19 *4*	7.09 *10*	av Eβ=831.3
(2080 *8*)	1427.71	98.1 *9*	4.388 *10*	av Eβ=835.6
(3508[#] *8*)	0.0	<0.9	>8.9[1*u*]	av Eβ=1506.9

[†] From intensity balance.
[‡] Absolute intensity per 100 decays.
[#] Existence of this branch is questionable.

$\gamma(^{94}Y)$

Iγ normalization: From Σ Iγ to g.s.=99.5% since Iβ to g.s.<0.9%.

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^{94}Sr β^- decay 1984Fu12 (continued)

$\gamma(^{94}Y)$ (continued)

E_γ[†]	I_γ[†#]	E_i(level)	J_i^π	E_f	J_f^π
102.1[‡] *1*	0.007 *2*	723.80	(1^-)	621.70	$(2,3^+)$
520.8 *1*	0.16 *4*	1427.71	1^+	906.91	$(2^-,3^-)$
530.1 *1*	0.20 *4*	1437.01	$(0^-,1^-)$	906.91	$(2^-,3^-)$
621.7 *1*	2.08 *13*	621.70	$(2,3^+)$	0.0	2^-
703.9 *1*	2.26 *13*	1427.71	1^+	723.80	(1^-)
723.8 *1*	2.55 *14*	723.80	(1^-)	0.0	2^-
754.7 *2*	0.13 *5*	2182.42	1^+	1427.71	1^+
806.0 *1*	1.86 *13*	1427.71	1^+	621.70	$(2,3^+)$
906.9 *1*	0.41 *6*	906.91	$(2^-,3^-)$	0.0	2^-
1427.7 *1*	100	1427.71	1^+	0.0	2^-
1560.7 *2*	0.068 *18*	2182.42	1^+	621.70	$(2,3^+)$
1649.2 *2*	0.067 *18*	2373.02	$(0^-,1^-)$	723.80	(1^-)
1751.3 *2*	0.053 *15*	2373.02	$(0^-,1^-)$	621.70	$(2,3^+)$
2063.0 *3*	0.040 *15*	2969.93	1^+	906.91	$(2^-,3^-)$
2182.4 *2*	0.61 *10*	2182.42	1^+	0.0	2^-
2246.1 *3*	0.045 *15*	2969.93	1^+	723.80	(1^-)

[†] From 1984Fu12.
[‡] Observed only in coincidence experiment.
[#] For absolute intensity per 100 decays, multiply by 0.942 *9*.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays